

CLAIMS

1. A polyester container wherein:

5 a projecting portion is disposed on an upper surface of a crystallized opening rim part, and at least a portion of the projecting portion which becomes a heat-sealing-face is an amorphous portion or a lowly crystallized portion.

10 2. The polyester container according to claim 1, wherein crystallinity of the crystallized opening rim part is 20% or more, and the crystallinity of the amorphous portion or the lowly crystallized portion of the projecting portion is in a range of 0 to less than 20%.

15 3. The polyester container according to claim 1 or 2, wherein the opening rim part is provided with the amorphous portion or the lowly crystallized portion.

20 4. The polyester container according to any one of claims 1 to 3, wherein a thickness of the projecting portion is in a range of 0.1 to 2.0 mm.

25 5. The polyester container according to any one of claims 1 to 4, wherein the projecting portion is disposed in the center and/or an outer peripheral side of the upper surface of the opening rim part, or disposed ranging from the center to the outer peripheral side.

30 6. The polyester container according to any one

of claims 1 to 5, wherein the container is a cup-like container, and at least a trunk portion of the container is orientationally or thermally crystallized.

5 7. The polyester container according to any one of claims 1 to 6, wherein the opening rim part has a flange part, and the projecting portion is disposed on the upper surface of the flange part.

10 8. A polyester container in which a projecting portion is formed on an upper surface of an opening rim part, the container comprising:

15 a resin piece formed so as to protrude toward the interior of the container in a state where the resin piece is substantially appressed against the upper surface of the opening rim part, the resin piece being formed by melting and pressing the projecting portion to deform it during heat sealing of a cover member having a sealant layer on an inner face thereof while the projecting portion is disposed to face the sealant layer,

20 the resin piece being bonded to the sealant layer of the cover member.

25 9. The polyester container according to any one of claims 1 to 7, comprising:

30 a resin piece formed so as to protrude toward the interior of the container in a state where the resin piece is substantially appressed against the upper surface of the opening rim part, the resin piece being formed by melting and pressing the projecting portion to deform it during

heat sealing of the cover member having the sealant layer on the inner face thereof while the projecting portion is disposed to face the sealant layer,

the resin piece being bonded to the sealant layer of the cover member.

10. The polyester container according to claim 8 or 9, wherein the upper surface of the opening rim part on an external side of the container from the projecting portion is formed below the upper surface of the opening rim part on an internal side of the container from the projecting portion, and

a resin lump is formed on a container external side of the projecting portion which is molten, pressed and thus deformed during the heat sealing of the cover member to the container main body.

11. The polyester container according to claim 10, wherein the opening rim part is bonded to the sealant layer of the cover member with heat sealing strength which enables easy opening.

12. The polyester container according to any one of claims 8 to 11, wherein the resin piece is formed into a tapered shape.

13. The polyester container according to any one of claims 1 to 7, wherein the upper surface of the opening rim part has a tapered face inclined obliquely upwards from a base portion of the projecting portion to the interior of

the container.

14. The polyester container according to claim 13, wherein the upper surface of the opening rim part on the external side of the container from the projecting portion is formed below the upper surface of the opening rim part on the internal side of the container from the projecting portion.

15. The polyester container according to any one of claims 1 to 14, wherein the opening rim part is heat-sealed with the cover member having the sealant layer made of a polyester resin with a melting point of 110°C to 225°C.

16. The polyester container according to claim 15, wherein the sealant layer is made of a polybutylene-terephthalate-based resin.

17. A method of sealing the polyester container according to any one of claims 1 to 7 in which a projecting portion is disposed to face a sealant layer, and a seal portion is heated and pressurized with a sealing head to heat-seal the container with a cover member having the sealant layer on an inner face thereof on an upper surface of an opening rim part, the method comprising the steps of:
melting and pressing the projecting portion by the sealing head to deform the projecting portion along the upper surface of the opening rim part in a state where the projecting portion is substantially appressed against the

upper surface of the opening rim part, thereby forming a resin piece protruding toward the interior of the container, and

5 bonding the resin piece to the sealant layer of the cover member.

18. The method of sealing the polyester container according to claim 17, comprising the steps of:

10 forming the upper surface of the opening rim part on an external side of the container from the projecting portion below the upper surface of the opening rim part on an internal side of the container from the projecting portion; and

15 forming a resin lump on a container external side of the projecting portion which is molten, pressed and thus deformed in a case where the container main body is heat-sealed with the cover member.

19. The method of sealing the polyester container according to claim 18, comprising the step of:

20 bonding the opening rim part to the sealant layer of the cover member with heat sealing strength which enables easy opening.

25 20. The method of sealing the polyester container according to claim 18 or 19, comprising the step of:

cutting the container external side of the projecting portion to control a shape or a size of the resin lump.

21. The method of sealing the polyester container according to any one of claims 17 to 20, comprising the steps of:

5 disposing, on the upper surface of the opening rim part, a tapered face inclined obliquely upwards from a base portion of the projecting portion to the interior of the container; and

10 deforming the projecting portion molten and pressed by the sealing head along the tapered face to form the resin piece into a tapered shape.

22. The method of sealing the polyester container according to any one of claims 17 to 21, comprising the step of:

15 forming a stepped portion in the sealing head to control the shape or the size of the resin piece by the stepped portion.

23. A method for manufacturing a polyester container comprising the steps of:

20 supporting an undersurface of a flange part disposed in an opening rim part by a female mold;

25 forming a projecting portion on an upper surface of the flange part by use of a clamp mold having a groove portion in a molding face;

crystallizing the flange part by orientational crystallization and thermal crystallization using the clamp mold and the female mold; and

30 subjecting the projecting portion to an amorphous treatment or a low crystallization treatment in the groove

portion of the clamp mold.

24. The method for manufacturing the polyester container according to claim 23, comprising the step of:

5 molding the polyester container from an amorphous sheet or a lowly crystallized resin sheet.

25. The method for manufacturing the polyester container according to claim 23, comprising the step of:

10 molding the polyester container from an amorphous or a lowly crystallized molded article for container intermediate formed by injection molding or compression molding.

15 26. The method for manufacturing the polyester container according to any one of claims 23 to 25, wherein a depth H of the groove portion of the clamp mold is in a range of 0.1 to 0.35 mm.

20 27. The method for manufacturing the polyester container according to any one of claims 23 to 26, wherein a temperature of the clamp mold is set to 70 to 130°C, and a temperature of the female mold is set to 130 to 200°C.

25 28. A method for manufacturing a polyester container, comprising the steps of:

 molding an article for container intermediate or a container article having a projecting portion on an upper surface of an opening rim part by injection molding or
30 compression molding;

thermally crystallizing the opening rim part; and
subjecting the projecting portion disposed on the
upper surface of the opening rim part to an amorphous
treatment or a low crystallization treatment.

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29. The method for manufacturing the polyester
container according to claim 28, comprising the step of:

performing the amorphous treatment or the low
crystallization treatment of the projecting portion by
cooling the projecting portion and/or the vicinity of the
projecting portion.

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30. The method for manufacturing the polyester
container according to claim 29, comprising the step of:

performing the amorphous treatment or the low
crystallization treatment of the projecting portion by
heating, melting, and then quenching the projecting
portion.

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